

REMARKS

The above-referenced application is amended to delete the multiple dependencies of claim 4 to avoid the multiple dependent claim filing fee.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "Verified with markings to show changes made".

Respectfully submitted,

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INVENTION DESCRIPTION

MARKED-UP VERSION SHOWING CHANGES

~~AUTOMATIC FIRE EXTINGUISHING SYSTEM~~

~~USING LIQUEFIED CO₂~~

METHOD, CHEMICALS AND AUTOMATIC FIRE EXTINGUISHING SYSTEM USING LIQUEFIED CO₂ TO REGULATE THE DISTRIBUTION OF FIRE EXTINGUISHING

1. Field of the invention: AGENTS

The invention belongs to the ensuring safety aspect. In concrete, it automatically gives the alarm in case of fire and automatically ejects the fire extinguishing chemicals.

Note: The term fire extinguishing agents or fire extinguishing chemicals in its broad meaning indicates water, compound, suspension, emulsion, foam, powder, or their mixtures which are used to extinguish fires in suitable conditions.

2. Background of the invention:

The current automatic fire extinguishing methods often use electric pumps with high power equipped with pressure relays connected to fire alarm sprinkler. In case of fire, the fire alarm sprinkler is broken, thus reducing the pressure in the permanent system, and activate the relay which starts the pump to supply water to the fire extinguishing system. When the power is cut off, the pump operated by the reserved generator will function. To remedy the leak due to defective assemble, a third pump with a pressure relay connected with the system will automatic start to supply water continuously.

Advantages:

The automatic fire extinguishing system can quickly put out the fire if it is regularly maintained according to the technological requirements.

Disadvantages:

1. Dependent on the power supply:

- The inevitable disadvantage of the technological solution is that the system is completely dependent on the power supply: if the power is disconnected and the generator breaks down, then the whole system is completely dead. Therefore, although there is no fire, the system must be regularly operated to check the reliability, which causes environmental pollution and constantly consumes electricity and petrol. Meanwhile, the fire extinguishing system itself cannot produce benefit to recover the invested capital.

- If the water tank is used to supply water automatically, pumps must be used to provide water, and the cost of building the water tank is very high.

- the self-sucking injectors to supplement foaming agent with a suitable ratio added to water to put out fires caused by petrol or oil, using the flow of water circulating in the pipe as a sucking dynamic;
 - the device using pressure to reverse the closing gate of the ordinary water waste system and opening gate to allow the fire extinguishing agent to return to the settling, filtering and oil separating system;
 - the system for settling, filtering, oil separating and the system for regulating and distributing the reserved water to fill up the receiving container promptly;
 - valves, pipe, hose, the fire extinguishing equipment installed in the walls;
 - all the high pressure devices are interconnected by pressure sustainable pipe and provided with enough pressure by CO₂ dissolved in the fire extinguishing agent;
 - with the liquefied CO₂, water or any fire extinguishing agent which is defined on the basis of the standards and regulations for fire protection and prevention, the physical and chemical properties of CO₂ as well as the technological specifications of the object to be protected;
3. New fire extinguishing agents are produced by the method described in 1 by means of: filling the already known fire extinguishing agents in the system described in 2 so that CO₂ under operating pressure dissolves in them, creating new fire extinguishing agents, which have the function of extinguishing fires owing to their inherent nature and that of carrying and discharging CO₂ into the burning place right in the first spray to increase the fire extinguishing effect.
4. Liquefied CO₂ mentioned in 1[2, 3] can be replaced by any on-inflammable compressed gas or liquefied gas.